



V135

Year in Review

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Photos from top left on cover: Vivian Hu, Lenny Martinez, Tara Lee, Robert Rusch.
Photos from top on this page: Skyler Adams, Alexander C. Bost, Robert Rusch, Alexander C. Bost

Feb. 28, 2015: Matthew Nehring, a freshman in East Campus, dies. The East Campus housemaster emailed residents that Nehring apparently took his own life in the Stata Center.

Mar. 4, 2015: Trial of Dzhokhar Tsarnaev, accused of 30 crimes related to the Boston Marathon Bombings of 2013, begins in Boston after appeals court rejects a final change-of-venue motion.

Feb. 26, 2015: The 49-person assembly limit for fraternities, sororities, and ILGs located in Boston is lifted. The limit was imposed after a student's fall.

Mar. 4, 2015: Christina Tournant, a freshman in Maseeh Hall and a member of sorority Alpha Phi, dies at home in Florida. She was on voluntary medical leave.

March 14, 2015: MIT admits 1467 students to the Class of 2019.

Feb. 4, 2015: Opening statements begin in the trial of Boston Marathon bomber, Dzhokhar Tsarnaev. Tsarnaev was being tried for 30 crimes related to the 2013 Boston Marathon bombings that killed three people and injured more than 250. He was also charged with the murder of MIT Police Officer Sean Collier.

March 31, 2015: The defense rested its case on Tuesday, clearing the way for closing arguments to be held. They called up only four witnesses.

Trial of Dzhokhar Tsarnaev

March 30, 2015: Federal prosecutors rested their case in the Boston Marathon bombing trial on Monday after bringing 92 witnesses to the stand over 15 days. The defense immediately begins its case.

April 8, 2015: Dzhokhar Tsarnaev was found guilty of all 30 counts he was charged with in the Boston Marathon bombings, including the killing of MIT police officer Sean Collier. The verdict was unanimously reached by the jury after 11 hours of deliberations over two days.

“[If] these terrorists thought they would somehow strike fear in the hearts of people, they monumentally failed. We know Sean would be very proud of that.

— Members of Sean Collier's family

April 29, 2015: The dedication of a permanent memorial to Officer Sean A. Collier was held in a ceremony that emphasized the strength of both Collier and the MIT community.

“I hope this graceful display of invisible forces can become a daily reminder of those invisible human forces that create community.

— President L. Rafael Reif

May 22, 2015: Dzhokhar Tsarnaev was sentenced to death for his role in bombing the 2013 Boston Marathon. The jury unanimously decided that the death penalty was appropriate for six of the 17 capital counts he was convicted of, though none of the six were related to the death of MIT police officer Sean Collier.



VIVIAN HU — THE TECH

“Today's verdict will never replace the lives that were lost and so dramatically changed, but it is a relief, and one step closer to closure.

— Jeff Bauman

New House

July 12, 2015: A sprinkler pipe burst on the fifth floor of House 2 of New House, causing four feet of flooding in House 2 and severe water damage to Houses 1 and 3. A total of 140 MIT students were given the option of moving into the Cambridge Hyatt Regency hotel for the fall semester.

Nov. 5, 2015: A steam pipe burst in the stairwell of New House's House 6, causing a flood on the first floor and part of the large, ground-floor hallway connecting New House's six houses.

Mid Nov., 2015: A heating hot water pipe burst in New House, resulting in a fire alarm and the evacuation of the building. It was the third pipe burst in New House this year. Overall, the damage caused by the flooding in New House has cost the Institute about \$6 million: \$4 million in repairs, plus about \$2 million to cover room, board, and moving expenses for the approximately 140 displaced New House residents.

Student Government

March 24, 2015: The Undergraduate Association Judicial Board issued a decision which found that UA President Shruti Sharma '15 had authorized a "constitutionally inappropriate" transaction when she transferred \$12,500 to fund Lil B's November visit to MIT.

April 14, 2015: Shruti Sharma '15 resigned a month early, bringing Matthew J. Davis '16 and vice president-elect Sophia Liu '17 into office within a week of their election, a month ahead of schedule.

New Buildings

The math department returned to a newly renovated **Building 2**. The building closed for renovations in 2013, and the math department has spent the interim in Buildings E17 and E18.

MIT's economics department moved back into **Building E52** after more than two years of renovations to the 1938 Art Deco building.

Construction on **MIT.nano** continues. The building is currently planned for completion in 2018.

Student Life

Mar. 26, 2015: Lil B expenditure is ruled 'constitutionally inappropriate' by UA Judicial Board.

April 15, 2015: In aftermath of UA scandal, both president and vice president make way for Davis and Liu.

April 29, 2015: In a ceremony, MIT unveils memorial honoring the service and sacrifices of deceased officer Sean Collier.

April 11, 2015: Matthew Davis and Sophia Liu win the UA election for president and vice president with 61% of votes cast in their favor.

May 7, 2015: Skeptical Senior House is last to receive RLAD; students are notified via email and are generally unhappy about the decision.

MIT's Plan for Action on Climate Change

MIT announced its "Plan for Action on Climate Change" on Oct. 21, declining to divest but pledging to:

- Launch eight Low-Carbon Energy Centers to research solar; energy storage; materials for energy and extreme environments; carbon capture, use and sequestration; and nuclear energy. Three others focusing on nuclear fusion, energy bioscience, and the electrical grid, will be developed over the next year.
- Develop an Environment and Sustainability major
- Reduce campus greenhouse gas emissions by 32% by 2030

In Guest Column, Fossil Free MIT refutes the plan's assertion

“Rather than changing ExxonMobil's course, MIT's partnership has, to the contrary, been used by the company as an excuse for inaction and to distract from its record of deliberate disinformation.

— An op-ed from Fossil Free MIT

June 5, 2015: Faculty urged divestment in open letter to Reif

June 15, 2015: Climate Change Conversation Committee came out in support of targeted divestment and the creation of a Climate Institute at MIT.

Investment in fossil fuels is incompatible with MIT's clean energy research

“If you look at the scientific literature, you learn that the bottleneck to tackling climate change is no longer technological capacity or policy know-how — it's political will and social will. Right now, MIT pays grad students like me to develop these technologies, but at the same time it's investing hundreds of millions of dollars into an industry whose business plan is fundamentally incompatible with the science of climate change and has a vested interest in maintaining the status quo.

— Geoffrey Supran

“In our judgment, the deliberate public act of divestment would entangle MIT in a movement whose core tactic is large-scale public shaming. This would retard rather than encourage the open collaboration and ability to hear new ideas that are central to our research relationships, central to our ability to help government and business think creatively together, and central to our ability to convene and inform the thinking of those with opposing views.

— MIT's Plan for Action on Climate Change

June 5, 2015: U.S. CTO Megan Smith '86 addressed the Class of 2015, reminding graduates of the importance of "wonder and discovery."

June 24, 2015: Having "run through its money," the UA announces that it must cut its budget by about half.

July 6, 2015: Dean of Student Life Chris Colombo announces that he will retire after seven years at MIT. He will continue to serve until a successor is found.

May 27, 2015: The State of New Jersey drops its investigation into Tidbit, a program developed by MIT student Jeremy Rubin. The program allowed websites to use visitors' computing power to mine bitcoin. Rubin was subpoenaed in 2013, shortly after developing Tidbit at a hackathon.

June 29, 2015: Demolition of former dorm Bexley Hall begins, with plans for a park to be constructed on the site.

“We organized tonight's vigil because the Tuesday before last, Veterans' Day, silently, innocuously, without any fanfare ... the planet's CO₂ levels emerged above 400 parts per million.

— Fossil Free MIT activist Geoffrey Supran on Nov. 23, to a group of about 70 gathered in Lobby 10

Vigil held for high levels of atmospheric carbon

On **Nov. 23**, Fossil Free MIT organized a vigil in Lobby 10 to "observe the final days that any humans alive today will likely ever again see atmospheric carbon dioxide levels less than 400 parts per million," as the group put it in a press release. Students and other activists performed live music, starting with Andrea Bocelli's "Canto Della Terra." The event, which gathered about 70 people, also featured speeches and poetry recitals.



PATRICK BROWN

Activists react to climate plan with sit-in for divestment outside Reif's office

Fossil Free MIT began a 24-hour sit-in outside of President Reif's office the day after MIT's climate plan was released, vowing to persist until MIT divests from coal and tar sands companies, establishes an ethics advisory committee for investments, and commits to achieving carbon neutrality on campus by 2040. The sit-in is still ongoing today, after more than 60 days.

Climate Action



MindHandHeart

April 2015: MIT launched the Healthy Minds Study to gather data on mental health and related issues. The survey yielded a 28 percent response rate.

Sept. 1, 2015: Chancellor Cynthia Barnhart and MIT Medical Director William Kettyle announce the MindHandHeart initiative, in response to the results of the Healthy Minds Study. The initiative will fund innovative wellness ideas from the community and help coordinate current mental health services.

Sept. 2, 2015: MIT releases results from the Healthy Minds Study, which found that:

- 83 percent of respondents sleep seven hours or more per night.
- 38 percent of MIT students exercise for three or more hours each week, whereas more than half of national respondents receive the same amount of exercise.
- 77 percent of undergraduates and 65 percent graduate agreed with the statement: “At my school, I feel that the academic environment has a negative impact on students’ mental and emotional well-being.” About half as many respondents agreed with this statement nationally.

“TMAYD is also a reminder to slow down for a little bit each day and connect with someone, be it someone new or a long time friend, about something that doesn’t relate to work.

— Izzy Lloyd ’18

TMAYD

Izzy Lloyd ’18 and Katie Ward ’16 organized TMAYD, “Tell Me About Your Day,” to get students talking to and supporting each other.

Mental Health @ MIT

Sept. 3, 2015: Delta Phi Epsilon, the campus’s newest sorority, begins recruitment.

Oct. 8, 2015: Academic and business leaders gather for Solve Conference which tackles global problems.

Oct. 8, 2015: MIT offers first half-online master’s program in management.

Sept. 20, 2015: Cara Anne Nickolaus, a third-year economics graduate student, dies. An email sent to the Economics students said the death was likely a suicide.

Oct. 21, 2015: Administration says that divestment would be too harmful to relationships; Reif proposes that a portion of budget allocated to research on low-carbon energy sources.

End of Year News Quiz

1. In December 2015, an MBTA train on which line took off without a driver?
2. The UA Council learned in 2015 that the UA had funded a \$12,500 lecture by what rapper?
3. What everyday item will be banned in Cambridge beginning March 2016?
4. Which of these are not innovations that came out of MIT in the past year?
 - a. A way to detect liver tumors using engineered bacteria and a simple urine test
 - b. The first algorithm that calculates the nth binary digit of pi without calculating all the previous digits
 - c. A machine translation system that learns grammar by asking questions to bilingual speakers
 - d. A more efficient incandescent light bulb that recaptures energy that would be lost as infrared radiation
 - e. A robotic cheetah that jumps over hurdles that it sees while running
5. Building 12 was torn down to make way for MIT.nano, which will assume what building number?
6. Which Sloan alum is running for president of the United States?
7. On what date was a Back to the Future hack on display in Lobby 7?
8. In what month did the Fossil Free MIT sit-in outside President Reif's office begin?
9. At the end of fiscal year 2015, how large was MIT's endowment?
 - a. \$4.3 billion
 - b. \$9.2 billion
 - c. \$13.5 billion
 - d. \$27.1 billion
 - e. The Institute keeps this information closely guarded, despite sustained pressure from some faculty to disclose more financial data.
10. How many inches of snow fell on Boston in the 2014-15 winter?
 - a. 51.7
 - b. 81.4
 - c. 110.6
 - d. 159.6
 - e. All of the above, depending on which of four competing meteorological standards for measuring snowfall you use.

Answers

1. Red line.
2. Lil B
3. Single-use plastic shopping bags
4. b. and c.
5. 12
6. Carly Fiorina
7. October 21, 2015
8. October
9. c. \$13.5 billion
10. c. 110.6 inches

Nov. 23, 2015: MIT reburies time capsule from 1957 found between buildings 12 and 26 during construction of MIT.nano.

Dec. 1, 2015: The MIT Black Students' Union presents a set of recommendations to senior administrators.

Jan. 29, 2016: Henry J. Humphreys resigns his post as Senior Associate Dean for Residential Life and Dining.

Oct. 22, 2015: Activists begin months long divestment sit-in by presidents office.

Dec. 10, 2015: Actor and filmmaker Matt Damon revealed to be class of 2016 commencement speaker.



OPINION IN REVIEW



MIT students and faculty often think deeply about the forces that guide the world we currently live in. *The Tech's* opinion section is a place where we can reflect on the world we want. Many of our contributors expressed themselves with the practical mindsets that are characteristic of our Institute, but in addition to their usual thoughtfulness and intellectual rigor, our writers invoked their values.

To be constructive, values were tied to reality. The relationship between the two was a driving force behind many opinion articles, which often took note of two sides to each coin of conversation: *what is* and *what should be*. Writers' calls for more privacy required understanding problems of intrusion. Conversations about health and high standards of living involved those about illness and poverty. This small sample of our writers' subject material demonstrates a commitment to both evidence and morals. In that way, even when an article discusses something painful or dives into severe criticism, still there exists a moral side that acts like a call to action. Our writers consistently reveal appreciation for life and a desire to improve it — a desire to talk about it!

With that said, this past year, some subjects were difficult to wrap our minds around. We lost several community members, including a fellow staff member of *The Tech*. Tension and grief took hold of campus, and we quietly vowed to remember the memories of those we have lost. At the same time, broad conversations about campus culture and mental health were renewed. A particular message we received at *The Tech* comes to mind, from a floormate of a student who took his own life.

"I have come to realize that people should always endeavor to speak up and to be forthrightly kind. Complimenting people every now and then is always a good thing to do. Stopping by someone's room — even if they seem a bit occupied — and saying hi is always an option. Yes, it's hard to be kind and friendly to everyone, especially if a lot of people know you and you feel like your attention is being divided unevenly or spread too thinly. But you never know the difference a few words could make."

Sometimes, it's the local voice that strikes the deepest chord. Although articles will not solve the greatest problems in the world, the people who write and read them often have the desire to make a difference, and they probably will.

We wish you a wonderful year and are looking forward to the insights that you'll continue to share.

— Claire Lazar
Opinion Editor

On reaching out to one another

by **Randall Davis**

March 19, 2015

Editor's note: Last Thursday, Professor Davis spoke to his students in 6.835, Intelligent Multimodal User Interfaces. His remarks are transcribed here with permission for the rest of the student body.

I've left some time in today's class so we have a few minutes to switch gears and talk about recent events at MIT.

Let me start by saying that I've been here for a couple of decades, and without question, the past two years and in particular the past two months have been the most difficult period I've seen in MIT's recent history. The events around the Marathon bombing and the recent suicides have sorely tested the social fabric of this place.

This has been a dreadful time; this isn't the way it's supposed to be. That's easy to say, but sometimes it helps simply to recognize that and say it aloud.

It also helps to be honest about the nature of our culture. This is a wonderful place and it's a difficult place. It's wonderful to be surrounded by such interesting, intelligent, and talented people. It is difficult to be surrounded by such interesting, intelligent, and talented people. We're all overachievers and it's difficult to quiet the voice that constantly compares us to others.

We are all subject to the imposter syndrome (faculty as well, by the way), fearful that our entry here was a mistake, one that will inevitably be revealed. That fear is what keeps you from asking questions in class: you're sitting there absolutely convinced that you're the only one who didn't understand something in a lecture, and if you ask about it the entire class will sit there smirking at your ignorance. In truth, most of the time 30 percent of the class is confused right along with you, and when you ask the

question, they all look vastly relieved. Trust me, I see that look on so many faces, that unmistakable "oh good, someone else didn't understand and asked the question." You are not alone. (And by the way, if 30 percent of you didn't understand, it's because I did a lousy job of explaining.)

Remember the other day in class when I asked a question for which the right answer was "I don't know"? That wasn't an accident. As I said then, no one here ever wants to say "I don't know," and that's a problem. Learn that it's OK to say that.

Another slant on our culture comes from humor — they say you can tell a lot about a culture from its jokes. Here's one I heard when I first came to MIT. A little background: in a single year — 1905 — Einstein published four papers: the first proposed the idea of quanta of energy, the second explained Brownian motion, the third proposed the special theory of relativity, and the fourth proposed the equivalence of mass and energy ($E = mc^2$). Each of them individually was world-changing; he wrote all four in one year.

The joke says: Around 1915 someone proposes to bring Einstein to MIT, but there's some resistance from the faculty. After hearing about his accomplishments someone asks "OK, so four good papers. But what's he done lately?"

The problem with our culture is that it has a truly unbounded appetite for accomplishment. This is great — we are never satisfied with yesterday's results. This is wearying — we're never satisfied.

So what can we do? We need to change the culture. We can start small by looking out for one another, reaching out to one another.

I learned this firsthand a while back when I took a course in winter camping and winter survival. A group of 14

of us spent two weeks in the Wind River Range in Wyoming in February, traveling on army surplus cross country skis, carrying 65-pound backpacks, sleeping in tents with the temperature routinely 20–25 below at night. It was a most wonderful and remarkable experience, to be out in the middle of the woods in winter.

It was also dangerous — the most pressing problem was hypothermia, the situation where you're not just cold, but losing body heat faster than you can replace it. It's life threatening — slide far enough down that hill and you die.

We learned to watch one another, and ask a simple question: "Are you cold?" If the answer was an emphatic, "You're goddamn right, I'm freezing my butt off," that was fine. If the answer was a vacant stare, that was trouble. Time to stop traveling and get that person warmed up (lots of hot sweet tea).

We need to do the same thing here, because depression is like that. We all get down a little from time to time, but if you slide too far down that hill, if you keep sliding down faster than you can get up, that's life threatening.

We need to watch out for one another and ask, "Are you OK?" Then listen carefully to the answer. If the answer is an emphatic litany of complaints about the amount of work that's piled up, that's one thing. But if you sense a quiet despair, it's time to act. Call the health service's 24-hour line (3-4481) and talk to them about the situation. They can guide you about next steps for helping someone.

We have to reach out to one another and care about one another. Just asking is a good start; it lets us know we're not alone. And that by itself is a very good thing.

Randall Davis is a professor in the department of electrical engineering and computer science.

When terror hits close to home

Missing headlines distort the truth

by **Suri Bandler**

STAFF COLUMNIST — October 15, 2015

For the past few weeks, I've been glued to my phone. I check it first thing when I wake up in the morning, while I'm eating, while I'm walking down the Infinite, in class, while I'm working on problem sets, and before I go to sleep. But I'm not checking fantasy football stats. I'm checking for reports of another terror attack and word that my little brother is safe.

My brother is currently studying abroad in Israel, and his school is located near the Western Wall in Jerusalem's Old City. Every single day without fail he texts me about another Palestinian terror attack — usually stabbings — directed against civilians. Last week, his teacher was one of the victims, stabbed in the neck for no reason other than being Jewish.

Since Oct. 1, there have been over 30 terror attacks carried out by Palestinian terrorists against Israelis, not including rocket attacks. Here is an abbreviated timeline:

—Oct. 1: Two parents were shot dead in front of their four young children. Fatah, the political party of Palestinian Authority's president Mahmoud Abbas, claimed responsibility for the murders. (This same "moderate" group is responsible for negotiating peace with Israel.)

—Oct. 7: A terrorist stole a gun, broke into a woman's home in Kiryat Gat, and tried to murder the family who lived there. (This happened right near my best friend's school. I frantically messaged her to make sure she was OK, and the hours before she answered were terrifying.)

—Oct. 7: A 25-year-old man was stabbed and badly wounded by a Palestinian terrorist in Petach Tikva, where my cousins live. Thankfully, a bystander tackled the terrorist and held him down until the police could reach the scene.

—Oct. 9: In Jerusalem, two American teenagers were beaten and stabbed after taking a wrong turn into an Arab neighborhood.

—Oct. 11: A suicide bomber, with her child in her car, detonated a bomb that wounded her daughter and a police officer.

Headlines reporting the recent terror attacks in Israel blur the victims with the attackers, the murdered with the murderers.

When someone gets stabbed, you would think that it is clear who the victim is and who the perpetrator is, right? Wrong. To my astonishment, the headlines reporting the recent terror attacks in Israel blur the victims with the attackers, the murdered with the murderers. On Oct. 3, an article published by the BBC was titled "Palestinian shot dead after Jerusalem attack kills two." The headline obscured who was being attacked and who was the attacker, and it completely failed to mention that the Palestinian died while stabbing members of a family, murdering the father and another man.

Here is an even more outrageous example. The Independent published an article titled "Israeli security forces kill boy, 16." When I first read that headline, I thought that a poor boy was killed without reasonable cause, and images of excessive force and police brutality came to mind. But in reality, that "boy" mentioned in the headline stabbed two elderly Jews on their way home, and the 16-year-old terrorist was killed to stop his stabbing rampage.

Can you imagine the mainstream media reporting on the Sandy Hook school

shooting with headlines like "20-year-old shot dead in attack at elementary school"?

The problem isn't restricted to the media. When UN Secretary General Ban Ki-Moon condemned Israel for the "killings [of four Palestinians]" and demanded that the government of Israel conduct an investigation, he failed to mention the fact that those Palestinians died in attacks that killed four Israelis. He condemned Israel but failed to condemn the attacks on Israeli citizens that made these defensive acts necessary.

One might expect that Israel's supposed peace partner, Mahmoud Abbas, would demand that his people stop these vicious crimes against innocents. But this is not so. Not only did Abbas's party proudly commit two of the murders, as mentioned above, but Abbas claimed that "we [Palestinians] are working to spread the culture of peace and coexistence between the people in our region." Then he turned around and justified the murders of unarmed civilians by saying, "every drop of blood spilled in Jerusalem is pure, every shahid [martyr] will reach paradise, and every injured person will be rewarded by God."

Surely, though, the terrorists are just fringe members of Palestinian society, and as a whole, such violence is rejected? Not necessarily. Many Palestinian civilians celebrated the attacks in various ways, by passing out candies in the street, by a mother naming her newborn after a killed terrorist, and by firing firecrackers in celebration of the murders.

It is time for all civilians to be able to walk in Jerusalem without the fear of being stabbed to death. And it is time for the Palestinian leadership, the international media, and the U.S. government to take a moral stand and unequivocally call terror what it is: terror.

Scientific illiteracy in left-wing politics

by Collin Vierra

April 2, 2015

It seems that every week we hear a new story that demonstrates a lack of scientific literacy in right-wing politics. Recently we learned that employees of Florida’s Department of Environmental Protection under the tenure of Gov. Rick Scott (R-Fla.) were instructed not to use the terms “climate change” and “global warming” in official correspondences. Sen. James Inhofe (R-Okla.) recently brandished a snowball on the Senate floor as evidence that global warming is a hoax. Last month Gov. Scott Walker (R-Wis.) refused to state whether or not he believed in the theory of evolution, and who can forget former Rep. Todd Akin’s (R-Mo.) famous gaffe about “legitimate rape”?

These politicians have been widely criticized — and rightly so — for their anti-science views. Rarely, however, are left-wing political figures held accountable for the same crime. As a Democrat myself, I think it is crucial that we move beyond partisan criticism and call out scientific illiteracy wherever it exists.

It is tremendously ironic that the political left, which frequently attacks the right’s denial of evolution, is much more likely to oppose one of the most promising scientific advances that we have achieved through the study of genetics: GMOs. Initiatives to mandate the labeling of GMO products have found varying degrees of success in blue states like Vermont, Oregon, Maine, Hawaii, and Washington. GMO labeling might make sense if modern genetic modification techniques produced foods that were substantially different from those produced by conventional methods, but the fact is that scientific studies have consistently and overwhelmingly shown GMOs to be safe for both humans and the environment. In fact, those concerned about the environment should praise GMOs, which allow us to pro-

duce the same amount of food while using less water and land, emitting less carbon dioxide, and applying fewer pesticides.

Perhaps the worst example of anti-GMO activism is the opposition to Golden Rice, which was genetically engineered in 1999 to help people suffering from vitamin A deficiency. Despite the promise of Golden Rice, activist groups like Greenpeace have gone so far as to support the sabotage of Golden Rice field trials across the developing world. Vitamin A deficiency causes several million deaths per year, and many of these deaths could be prevented if not for widespread, anti-scientific opposition to genetic engineering.

The political left loves to bring up scientific consensus when discussing climate change and evolution, but it rejects scientific consensus when it comes to discussions about genetic modification, nuclear energy, and vaccines.

Although the political left may be genuinely concerned about the environment, its lack of scientific literacy still inspires it to promote policies that are counterproductive to its goals. And since the political right often denies the reality of environmental issues outright, the left’s unscientific policies are the only ones discussed and implemented.

The left’s aversion to nuclear energy stands out in particular. Senate Democrats have held ten hearings on nuclear safety since the 2011 Fukushima disaster. But discussion of this disaster requires some perspective. The Fukushima plant was built on the tectonically active “Ring of Fire,” and it required a tsunami trig-

gered by a magnitude 9.0 earthquake to cause the meltdown. The plant itself was in violation of myriad safety recommendations. Still, short-term radiation exposure from the plant killed exactly zero people. The liberal LNT model, notorious for overestimation, predicted a total of 130 deaths from long-term exposure. The tsunami itself, by comparison, killed 16,000.

Fracking enrages the left even more. To be sure, fracking is not risk-free, and many experts have proposed better regulations to ensure that cement casings are more secure, for example. The oft-heard claims that fracking causes dangerous earthquakes, poisons drinking water, and produces exceptional air pollution, however, are misleading. The left has some legitimate concerns about fracking, such as the safe disposal of wastewater, but many charges levied against fracking are appropriately applied only to issues incidental to the process of gas extraction. Other charges — that fracking is linked to seismic activity, for example — are technically true, but also hold for conventional wells, mining, and geothermal technology.

Left-wing politicians have generally endorsed large “green energy” subsidies to combat climate change, but the reality is that today’s green energy is simply not advanced enough to fuel a Western standard of living. Subsidies for solar and wind power will do little to reduce carbon emission in the long term, and subsidies for ethanol and electric cars may actually increase carbon emissions. Vast tracts of carbon-sequestering forest and grassland have been cleared to plant corn for ethanol production, and electric cars are ultimately powered by coal. Moreover, every dollar spent subsidizing today’s unproductive renewable energy is a dollar taken away from green energy research. In the meantime, the left’s irrational fear of nuclear energy and fracking means that instead of transitioning to lower-car-

bon energy sources in the short run while greener technologies are developed, we will continue to rely disproportionately on dirtier oil and coal.

Bill Maher is regularly applauded for his anti-vaccine rants and is rarely confronted for using the typical conspiracy theorist’s defense: I’m just asking questions.

Finally, the left has a vaccination problem. Four of the five states with the highest vaccination-exemption rates are blue. California (my home, sweet home) is suffering from a measles outbreak. Meanwhile, leftist

pundit Bill Maher is regularly applauded for his anti-vaccine rants and is rarely confronted for using the typical conspiracy theorist’s defense: I’m just asking questions.

The political left loves to bring up scientific consensus when discussing climate change and evolution, but it rejects scientific consensus as a valid metric when it comes to discussions about genetic modification, nuclear energy, and vaccines. And, in fact, while a disbelief in evolution is foolish, it is not nearly as dangerous as a rejection of modern technology.

Vaccines freed us from polio and smallpox. Genetic engineering, along with other techniques, has helped us to produce a cheap, stable, and more environmentally friendly food source. And fossil fuels, for all their problems, have made us so wealthy that we can now afford to research environmentally friendly

alternatives. This is a luxury that could not be imagined by the nearly-half the world’s population that still cooks and heats its homes with wood, trash, and dung. Indoor air pollution contributes to roughly 4.3 million premature deaths each year — more than the total number of deaths caused by outdoor air pollution from all sources, including fossil fuels.

The political right is properly criticized for its anti-science views. The political left, however, is often unfairly spared similar criticism. Those on the left must be willing to criticize members of their own camp when they endorse policies based on poor scientific understanding. Otherwise, the left and right may find some common ground, but it will be to the detriment of society as a whole.

Collin Vierra is a member of the Class of 2015.

The unnoticed expansion of domestic surveillance

A cybersecurity bill may further compromise citizens’ privacy

by Keertan Kini

STAFF COLUMNIST

April 9, 2015

Earlier this week, John Oliver of HBO’s Last Week Tonight presented a compelling piece on the upcoming deadline for the reauthorization of the Patriot Act — the law passed in the wake of the 9/11 attacks which greatly enhanced the government’s powers of surveillance. At the time, the public asked few questions, demanding action for greater security and disregarding the potential cost. Twelve years later, Edward Snowden leaked classified documents from the National Security Agency about the breadth and depth of the NSA’s surveillance programs from that point forward, sparking national and international debate.

Programs such as PRISM for foreign

surveillance and domestic wiretapping drew huge outcry. At the time, Brazilian President Dilma Rousseff accused the U.S. on the floor of the United Nations of “a breach of international law and an affront” to national sovereignty. Similar claims were made about domestic programs, especially since the their capabilities, let alone their use, were unknown to the vast majority of Americans.

In the two years since the furor, the public has largely forgotten the debate on domestic surveillance. Oliver interviewed Snowden on these matters, trying to draw attention to the impending expiration, and likely subsequent reauthorization, of the Patriot Act on June 1, but June 1 is not the most imminent deadline. We are poised to repeat our mistakes with a bill that critics have already dubbed the “Patriot Act 2.0”:

the Cyber Information Sharing Act (CISA) that may be signed into law by May.

In the wake of high-profile security breaches — of Sony Pictures, Anthem, JP Morgan, Home Depot, and Target to name a few — which exposed corporate data, credit card data, and social security numbers, Congress has taken action. In a bill aimed at improving cybersecurity and preventing further data breaches, the Senate Intelligence Committee passed CISA, which will likely be voted on later this month. The bill incentivizes companies to share threat information and offers liability protection to those that do.

The bill is not merely a knee-jerk reaction to a few rare and prominent leaks. According to Netherlands-based security firm Ge-

malto, in 2014, there were more than 1400 data breaches of companies and government agencies, resulting in over 974 million data records being lost or stolen — an increase by almost 50 percent from 2013. Only 4 percent of the breaches were considered “secure,” in which the records exposed were rendered useless by encryption.

However, when CISA passed the Senate Intelligence Committee on March 13 by a 14-1 vote, only Sen. Ron Wyden, D-Ore., voted against it. In a public statement, he wrote, “If information-sharing legislation does not include adequate privacy protections then that’s not a cybersecurity bill — it’s a surveillance bill by another name ... It makes sense to encourage private firms to share information about cybersecurity threats. But this information sharing is only acceptable if there are strong protections for the privacy rights of law-abiding American citizens.”

Many individuals and groups echoed his warning. In a letter to Chairman Richard Burr, R-N.C., and Vice Chairman Diane Feinstein, D-Calif., a coalition of civil liberties groups, security experts, and academics warned that “CISA disregards the fact that information sharing can — and to be truly effective, must — offer both security and robust privacy protections.” Signatories include the ACLU, the Electronic Frontier Foundation, the Brennan Centre for Justice, and MIT’s own Prof. Ronald L. Rivest.

The biggest criticisms stem from the bill’s broad definitions and uses of the shared data. Under the bill, the government may retain and use any shared information resulting from cybersecurity threats related to “an imminent threat of death, serious bodily harm, or serious economic harm.” The use of shared data is not limited to any specific agency. Under the Homeland Security Act of 2002, the data would be shared with “all appropriate government agencies,” including the FBI and NSA. The data may be used not only in combating broad threats but also

in criminal proceedings. Since all data shared under the act by companies is voluntary, the data would be accessible without a warrant, without a judge to determine relevance. Lastly, given the liability protections extended to companies who share data, consumer privacy protections from corporations are potentially undermined.

We live in a constantly accelerating world of sensors and networks, where the Internet of Things is becoming more real every day. Not knowing what information about you is being shared and analyzed is disconcerting at best and terrifying at worst.

We live in a constantly accelerating world of sensors and networks, where the Internet of Things is becoming more real every day. Not knowing what information about you is being shared and analyzed is disconcerting at best and terrifying at worst. Yet instead of engaging with these pressing issues, the news is inundated with predictions of a presidential contest 19 months away.

Proponents of the legislation note that any data accepted must be stripped of personal information. They also state that only data directly pertinent to cyberattacks can be shared. Regardless of interpretation, the bill has a much better chance of being signed into law than its predecessor last year, the Cyber Intelligence Sharing and Protection Act (CISPA) that was prevented from passage by civil rights organizations. According to ACLU media strategist Rachel Nausbaum, CISA is potentially worse than its forebear, stating in a blog post that it “fails to limit what the government can do with the vast amount of data to be shared with it

under this proposal.”

However, the bipartisan support for CISA in the Senate and the presence and support for similar House bills — the Protect Cyber Networks Act and the National Cybersecurity Protection Advancement Act — mean that the measure will likely pass Congress. Both House bills are scheduled for the week of April 20, and CISA will likely hit the Senate floor at the same time. Reports this week about a breach of the White House and State Department networks last year are adding even more pressure for cybersecurity and information-sharing legislation. The final version of this bill may well be law by May.

The debate over privacy and security is incredibly complex, especially since those professionals and officials who have the most knowledge to weigh the costs and benefits cannot share that knowledge in the service of national interests. Victories are not announced, while failures are public and quite possibly fatal. The Patriot Act was passed in the shadow cast by 9/11, with the motto “never again” on everyone’s lips for good reason. Yet avoiding this debate due to its complexity or its inherent murkiness is incredibly shortsighted.

Civil rights activists often quote Benjamin Franklin: “Those who would give up essential Liberty, to purchase a little temporary Safety, deserve neither Liberty nor Safety.” The quote, while accurate in wording, is often taken out of context. Rather than Franklin favoring liberty over safety, he was denouncing a choice presented to him by the colonial governor of Pennsylvania. Franklin sought both liberty and safety, unwilling to trade either.

Security and privacy interests need not be at odds with one another. So rather than waiting a decade until the next Edward Snowden reveals the scale and scope of government surveillance, before the final version of CISA becomes law, we should have this public debate. We should never have stopped.

Keertan Kini is a member of the Class of 2016.

Alcohol abuse, illegal drugs, and misinformation

by Hairuo Guo

December 3, 2015

Earlier this week, members of the MIT community found in their inboxes an email from Chancellor Barnhart. Immediately beneath the ominous subject line of “Alcohol abuse, illegal drugs and our community” were the expected exhortations against binge drinking and drug use. This time, however, these words came backed by evidence. To quote the email, “The results of the 2015 Healthy Minds Study and 2014 Community Attitudes on Sexual Assault survey show the direct — and negative — links between substance abuse and student health and safety.” Included helpfully were also hyperlinks to these two studies, as well as one to the MIT “Statement on Drug-free Campus and Workplace Policies,” which contains, among other things, a list of “selected drugs and their effects.” In short, a bevy of material to support a seemingly obvious claim.

The problem? Within all that material, the data supporting the conclusions Chancellor Barnhart refers to simply aren’t there. Neither of the reports find any sort of causal relationship between substance use and student safety, negative or otherwise. The 2015 Healthy Minds Study did ask respondents about binge drinking, cannabis use, and use of cigarettes in addition to questions pertaining to mental health. But if a correlation was established, it isn’t presented in the final report; all that is given are graphics comparing percentages of occurrence for MIT students to those in the nation.

Her words are more tenable with regard to the 2014 Community Attitudes on Sexual Assault — but only with dangerous implications. There is a single statistic in that report that seeks to represent instances of student victims who were sexually assaulted while drunk, high, asleep, or otherwise incapac-

itated (44 percent out of all victims). While that is a disturbingly high percentage, it is of being incapacitated, conditional on being victimized, not the other way around. It has no real correlative value, especially considering that being incapacitated is distinct from alcohol abuse or drug use. To say that this statistic shows the “[direct and negative link] between substance abuse and student health and safety” is to spin a story far removed from what the published numbers say. Even worse, it seems to shunt blame onto the victims, implying that their victimization would not have happened had they not put themselves in precarious positions.

Regardless of whether or not you agree with the stated claim, it is, in the context of the data that was provided, a glaring misrepresentation. And it is not the only one. The list of “selected drugs and their effects” found in the hyperlinked statement (which itself is part of the Mind and Hand Book) is laughably bad, chock-full of errors, and apparently copied from the website of a small for-profit nursing school located in Virginia. Accusations of plagiarism aside, one would expect that an institute such as ours would compile a concise, accurate, and clearly organized list of proclaimed dangerous substances and their effects for the benefit of its students. Instead, we are given a reference that places PCP (an addictive anesthetic with dissociative qualities) in the same category as LSD (a non-addictive serotonergic psychedelic) while neglecting to mention other common psychedelics altogether. A former student on a particular mailing list summarized the accuracy of this source neatly by noting that it states that “GHB ... is made from gamma butyrolactone and sodium or potassium hydroxide, which means that it is essentially degreasing solvent ... mixed with drain cleaner.” In the words of the student, the analogous assumption

for table salt would be that “it is essentially nuclear breeder reactor coolant (sodium) combined with WWI poison gas (chlorine).”

While sodium and chlorine might not be a toxic combination, that of sensationalized misinformation and an incomplete Good Samaritan policy is. The unreasonable distinction between alcohol and other substances made in the Mind and Hand Book still stands. Although it is now promised that “MIT will treat [any illegal substance-related emergency] as a health and safety matter first and foremost,” the threat of disciplinary action remains. Notably, students who “spot” (i.e., knowingly look after someone who has taken an illegal substance) are excluded from all protections offered. What results from this entire mess are students who are more likely to consume drugs in solitude, friends who are hesitant to offer supervision or even inquire too much, and potential Good Samaritans who are left to carefully balance the possibility of consequences against the chance of a false scare (heightened by inaccurate information) before seeking medical help.

Chancellor Barnhart’s term in office has been characterized by her dedicated efforts to reach out to the student community and to understand its perspectives and struggles. It is without a doubt that this email was sent with the best intentions in mind. The shoddy quality of the information provided, however, is a reminder that there is still much to be done. Failing to give facts the weight that they are due will only alienate students, and we, being the fastidious, contentious, nit-picky bunch that we are, will notice. It is therefore heartening to hear that “the people of MIT have been thinking and talking openly about campus life issues,” but let’s remember that when either is done in the absence of facts, it is done in vain.

Hairuo Guo is a member of the Class of 2017.



ARTS IN REVIEW



The arts cannot be written off as something only for humanities majors or liberal arts campuses. In fact, art flourishes and pushes the bounds of the possible in the presence of technology. The year 2015 has showcased the excitement that can be generated by the close relationship of art and technology — this year has brought us award winning films made on iPhones and others funded by Kickstarter. We've seen virtual reality documentaries, and we've heard music compositions thought long lost but brought back to life with the help of algorithms. In this way, the arts certainly have a place at MIT.

Location definitely helps to foster an active and vibrant arts scene. The immersive and encompassing culture of Boston and Cambridge is likely a factor that appealed to many of us when we were making college decisions. Maybe you're taking a study break by going to a poetry slam at the Cantab Lounge in Central or a concert at the Sinclair in Harvard Square. If you prefer a journey across the river, your options are even more vast: it's easy to make a trip to the Museum of Fine Arts or to break our College Card for the Boston Symphony Orchestra.

But most importantly, the arts at MIT are created and nurtured by the people. We don't have to brave the Green Line or make the trip to Harvard Square to enjoy the arts. We tune into WMBR to make psetting more bearable, find ourselves wandering through the List Center or the MIT Museum to admire their latest installments, and stand in lines that wrap around Kresge Lawn to get great seats at an cappella concert. Every semester our campus's many music and theater groups put (at least) as much time and effort into their productions and performances as they put into their class work — it is difficult to find a weekend when the arts scene on campus is at all lacking.

—Karleigh Moore
Arts Editor

Our reviewers' favorite 2015 movies



COURTESY OF KERRY BROWN AND TWENTIETH CENTURY FOX

The Wolfpack

The Wolfpack, a documentary, reveals the mysterious lives of the Angulo children who were forbidden to leave their apartment or to have contact with anyone outside of their immediate family. The Angulo children were film aficionados like no others. They spent their days and nights consuming movies, drawing movie posters, and meticulously copying down lines from their favorites so they could construct scripts to act out with the many (convincing) props they created. Movies and their mother were among the few things these kids had to help them stay sane.

The Wolfpack is mesmerizing but not because it has stunning cinematography or dazzling effects: the footage is grainy, resembling home movies. Mosselle's camera is surprisingly non-judgmental, especially considering that the film's subject matter screams "child abuse" and "domestic violence."

—Karleigh Moore

Inside Out

[*Inside Out*] follows Riley Anderson (Kaitlyn Dias), an eleven year old girl, as she and her family uproot their lives to move from their home in Minnesota to San Francisco. Many stories use this setup, of course, but what makes this film stand out is that we follow this narrative and Riley's resulting emotional turmoil mostly from the inner workings of her mind. *Inside Out* perfectly captures and personifies something we have all experienced and will continue to experience: the emotional and mental turmoil that precedes self-growth. Thus, Pixar shows us once again that animated films are not always just for children.

—Ka-Yen Yau

Tangerine

I know that "heart-warming" isn't an adjective you'd usually associate with a movie set around the sex-trade industry in Los Angeles, but let me tell you, *Tangerine* is a heart-warming film — forgiveness and acceptance are key themes

throughout the movie.

Sin-Dee (Kitana Kiki Rodriguez) and Alexandra (Mya Taylor) are best friends — they gossip, they have breakfast together, they help each other with their makeup. But as with all friendships, they have their ups and downs. *Tangerine* follows the women through downtown Los Angeles as they deal with a Christmas Eve full of intense drama.

—Karleigh Moore

Room

Told from the perspective of 5-year-old Jack (Jacob Tremblay), *Room*, [based on] a 2010 novel by Emma Donoghue, is a captivating tale about Jack and his mother, Ma, who are confined to a small room with no exposure to the outside world. Except for the occasional nighttime visit from their captor, Old Nick (Sean Bridgers), Jack and Ma (Brie Larson) spend all of their time with each other, playing games, watching TV, and reading books. Ma knows what lies beyond the walls, but as far as Jack knows, the room is his entire world. Tremblay

does a phenomenal job playing the sheltered yet infinitely curious 5 year-old, and he brought me to tears with his incredible range of emotion which varied from frustrated rage to utter sadness.

—Tara Lee

Bridge of Spies

[*Bridge of Spies*] is reliably outstanding on all fronts and manifestly imprinted with Spielberg's trademarks. The lead, James Donovan, played by Tom Hanks, finds himself in extraordinary circumstances: an insurance lawyer, he's called upon by his country to defend a Soviet spy and later to negotiate the first Cold War prisoner exchange. Donovan, a believer in the unqualified privilege of justice, doesn't take this on lightly. He mounts a solid case against overwhelming odds, fighting for the Constitution in his battleground of judges and juries.

—Ray Wang

Steve Jobs

Midway through the film, a young Lisa mentions to her father [Steve Jobs] that she's listening to different versions of the same song on her Walkman. And that perhaps best describes the structure of the film itself, and also perhaps our collective fixation on telling, and retelling, the Steve Jobs story — a repetition of our frustrated connection with this pub-

lic figure whose vision has shaped much of the way we interact with technology, each other, and ourselves. Intimate yet unknowable. Close yet separated. Like trying to connect with someone through a computer screen.

—Aleksandra Stankovic



Brooklyn

Brooklyn follows the story of Eilis Lacey (played — nay, inhabited — by Saoirse Ronan), a young woman in Ireland who finds little to look forward to in her small hometown, and so moves

to Brooklyn, New York for a job and an open-ended future. It is set in the 1950s, which might not seem like a relatable period for the modern traveller. Yet when Eilis asks how long letters from Ireland take to arrive, and the answer is “a long time at first, and then no time at all” — one recognizes how time dilates the more eagerly you wait for something, and knows exactly what that means.

—Carolyn Fu

The Martian

Set in the not-too-distant future, *The Martian* tracks astronaut Mark Watney (Matt Damon) as he fights to return home after being accidentally stranded on Mars by his crew, leaving him with few supplies and a lot of disco. Scott, no stranger to epic filmmaking (*Gladiator*, *Kingdom of Heaven*, *Exodus: Gods and Kings*) nor science fiction blockbusters (*Alien*, *Blade Runner*, *Prometheus*), keeps the action (both cerebral and physical) engaging while leaving room for gorgeous sequences that capture the vast, beautiful desolation of space. The story effectively captures the transcendent power of the things that bring people together, boldly making the claim that the true value of space exploration lies in the innovation and collaboration that make the imaginable possible.

—Aleksandra Stankovic





ALEXANDER C. BOST — THE TECH

DANCE IN REVIEW



TAMI FORRESTER — THE TECH



ALEXANDER C. BOST — THE TECH



LANDON CARTER — THE TECH



ALEXANDER C. BOST — THE TECH



ALEXANDER C. BOST — THE TECH



ALEXANDER C. BOST — THE TECH



MELISSA RENEE SCHUMACHER — THE TECH



AL EXANDER C. BOST — THE TECH

THEATER IN REVIEW



ALEXANDER C. BOST — THE TECH



ALEXANDER C. BOST — THE TECH



ALEXANDER C. BOST — THE TECH

CAMPUS LIFE IN REVIEW



We're never alone, even when we think we are. MIT may seem like an intimidating place at times, but we hope that these stories in 2015 helped humanize the place — and the people — a little more. From campus activists to sexual assault survivors, from bright-eyed freshmen to those who have left and come back, this section is for us. All of us. Let's take a moment to revisit a few of the pieces that made us laugh, cry, and think over this past year. Can you see parts of yourself in these stories?

— Kath Xu
Executive Editor

The time is right: social justice at MIT

By Abigail Francis

It is with a heavy heart that I write this letter. As an institution we are standing in reflection and grief after too many deaths of our students and employees. Nationally from Ferguson to Baltimore, we are grappling with large scale racial and class injustices. I was asked to contribute to this ‘Intuitively Obvious’ column, and it is a good time for us to consider how best to care for each other, our community, and for ourselves.

This summer will mark my tenth year here at MIT. As I think about our social justice work, I am reminded of a quote from Margaret Mead: “Never doubt that a small group of thoughtful and committed citizens can change the world.” I have come to realize that it is only so long that the same small group of people can continue to help keep students and each other safe, functional, productive, and whole. I believe we need more citizens, more commitment, more thought, and more institutional infrastructure to bolster the efforts of the few incredibly dedicated and talented staff, students, alumni, and faculty working to create positive change.

Some of the most important work that I do is in supporting those who fall within the margins of the marginalized. People are often surprised to learn that so much of the community building I offer is with LBGTQ self-identified people of color, women, people with disabilities, and international students. I have such respect for them — especially those who have told me that they are alive today because of the work we’re doing. Despite losing their tuition funding or all their support networks after coming out to their friends or family, they have found the space and the courage to love or to be who they truly are, even in the face of harassment and discrimination in these very halls.

We all hold a collective responsibility to shape the future of MIT. So today I ask us these challenging questions:

If we are to fulfill our mission “to work with others and bring knowledge to bear on the world’s great challenges” and “to work

wisely and effectively for the betterment of humankind,” then how do we, as an institution, work to ensure that there are more black men in our colleges than in our prison systems?

What would it take to ensure that all women of color on our campus shared the same level of self-esteem and self-confidence as their peers and colleagues?

With students and faculty that have ties all over the world, what does it mean for us that there are 80 nations that criminalize homosexuality, seven of those where it is punishable by death, or that there are 32 states where you can still be fired for being LBGTQ identified?

How do we address the fact that roughly one in four females and one in seven males in the US will experience sexual violence, even here at MIT?

How do we acquire more accurate data on, offer more support to, and track the progress of our transgender, genderqueer, and gender non-conforming students?

What would it take to have our staff and faculty match the diversity of our undergraduate student body?

How can we change the fact that based on student quality-of-life survey data, LB-GTQ students, students of color, women, and international students are significantly less satisfied here, some even reporting that they feel less safe on campus and more isolated than their majority group peers?

What would it mean to have more trained, experienced, and qualified leaders in social justice helping to shape our future?

As I plan social justice efforts, I keep hearing (mostly from those with majority group identities) that MIT is not “ready” to talk about privilege, especially white privilege. I think that we are. At this time in our nation’s history, we have a responsibility to talk and to act, to undo and eliminate racial injustice as well as sexism, heterosexism, cis-gender privilege, and other forms of oppression. As Martin Luther King Jr. put it, “the time is always right to do what is right.”

Now, I know that we have made some

strides forward. We should take pride in these. We have added gender-affirming surgeries to our health insurance policy. We are looking to add gender-inclusive housing options and more gender-neutral restrooms across campus. We have created an Institute Community and Equity Office and broadened resources and staffing in Violence Prevention and Response and in Student Support Services. We have several offices and student groups that focus on supporting various aspects of people’s identities, and those groups are making more connections with each other. We have created Employee Resource Groups, included diversity-related awards in our recognition programs, and host an annual MLK scholars program and Diversity Summit. This list could go on.

But if “diversity” is listed as one of the four main initiatives on our homepage, why are there still so few resources available for these efforts? How can we help that same small group of volunteers striving to move mountains with regard to equity, inclusion, respect, justice, and campus climate? What would it look like if we understood, valued, and talked about “diversity” in the same way that we talk about cancer, global initiatives, or energy?

Imagine what could happen if, today, each of us thought about one area of identity or social justice where we are less comfortable — nationality, religion, class, sexual orientation, gender identity, race, size, ability, age — then leaned into that discomfort and read an article, talked to a friend, listened to a podcast, or watched a video to learn more. What if we each took action regarding something we had learned? What if we could then challenge an internal bias that we hold, offer an educational lens to a degrading joke, or intervene in a micro-aggression that we witness? Yes, this work is messy. It is uncomfortable. It is in everyone’s and in no one’s job description and academic pursuits. It is relatively unclear. But if we make the time and effort, dedicate resources, learn more, and invite someone to join us, then eventually we all move forward.

This winter we organized a peaceful protest and panel discussion about if and how Black Lives Matter at MIT. Following the event I made a list of “the ten racist things I saw while planning an event about race at MIT.” And here’s the thing: I’m on that list twice. Sometimes the hardest and most im-

portant aspect of this work is how we transform ourselves along the way. That includes being honest, compassionate, accountable, and patient with ourselves and with others. Because there is so much work to do. We put this event together in just two weeks and then 430 people showed up. The momentum

is here. The time is now. Remember, “the time is always right to do what is right.” We collectively own the responsibility to shape the future towards more respect and caring for one another. I look forward to continuing this work, and I hope you will join me.

Learning to take rain by storm

A California girl is introduced to rain

By Gillian Belton

This was it. This was the day I had been dreaming of for the past few months, the day I had been fantasizing about in my mind over and over again since my official enrollment into MIT, the day I thought might never come: today was the first rain.

Coming from California, which has been in some form of a drought for most of my life, I’d been taught to value water as if the reservoirs were on their last few drops. Which, actually, currently is the case. And so, now, on this rain-filled Boston day, I felt like I was in Californian heaven.

If you were to have looked at the texting history with my family, you’d find that I’d been sending screenshots of the rain-filled Cambridge 10-day forecast for the past nine days. This wasn’t one of those “California rain forecasts” that I was so familiar with. In California, if it says it’s going to rain, you can bet that by the time the day actually arrives, the forecast has changed to sunny and 75 degrees. No, this was the real stuff.

Upon waking up, I could hear the splashes of the raindrops against my window; it was such a beautiful sound. I immediately sat up in bed and just stared in awe at the mysterious water droplets falling from the sky. I felt so prepared for this day. After wasting about 20 minutes or so just watching the rain, I finally got out of bed and organized my rain gear. I had my running shoes, thick jeans, a sweater, a rain jacket, and a \$2 umbrella from Ikea, newly bought specifically for Cambridge because I didn’t have one back home. I just knew this day was going to be so much fun. I mean, what could possibly go wrong?

After finishing breakfast, as I walked outside along with 30 or so other Simmons

residents to catch the Tech Shuttle, I spotted someone with a tarp on top of their backpack.

Wow, that looks ridiculous, I thought.

It looked a bit like a Superman cape as it flapped in the wind, and I wondered why he thought he needed it. However, I quickly forgot about the tarp as my thoughts returned to the Tech Shuttle stop.

As a result of living in Simmons, which is the last dorm on the Tech Shuttle’s route around campus, the shuttle was beyond full. It was so crowded that there were people practically falling out of the door, and so it took about a two-second glance to realize I wasn’t going to be taking the shuttle. And so with a defeated, and seemingly unanimous sigh, everyone around me backed up away from the shuttle and started shuffling down the long trek to class. This wasn’t exactly how I had expected the day to start out, but my good mood wasn’t going to be ruined that easily.

As I started out my walk to class, I became super excited as I pulled out my umbrella. I guess I now know what people mean when they say “you get what you pay for,” because it only took about 30 seconds before my \$2 Ikea umbrella turned inside out and became permanently useless. But even this wasn’t enough to ruin my mood, and so I soldiered on.

Walking to class was most definitely a dampening experience. By the time I arrived in 34-101, I was drenched. I might as well have taken a nice and long shower, because I don’t think anyone could have told the difference. My shoes made it feel like I was walking in my own personal puddle — one that conveniently followed me around wher-

ever I went.

Even though I was clearly drenched, I naively imagined that my backpack wouldn’t be. And so you might imagine my surprise when, after opening up my bag before class, I found that all of my notebooks were completely drenched. The pencil marks were barely visible and I certainly couldn’t take notes in them that day. Now this was the final straw for me — no one messes with my notes. No one, not even rain. In that moment, I decided I was done with this new thing called rain.

The rest of the day continued as you might imagine, as I frustratedly attempted to dry my notebooks and air out my clothes. The day had not turned out as I had expected, to say the least. My clothes were less dry, my umbrella was less functional, my notes were less readable, and my mood was less agreeable.

But eventually as my notes dried and my mood improved, I realized that maybe the bad day wasn’t the rain’s fault, but my own lack of preparedness. Maybe, just maybe, rain boots might have been better than running shoes, a \$2 umbrella not that great of an idea, and a Superman cape actually a fantastic addition for my backpack.

When I returned home to Simmons, I immediately went online and ordered the gear I needed in time for the next rainy day. I might not have looked as stylish as before, but damn was I prepared. And so, when the next rainy day came, I was able to go out into the rain with that same stupid-happy grin that can only belong to a Californian.

Gillian Belton is a member of the Class of 2019.

Spiral

“SAAM Says” is a collection of narratives by sexual assault survivors and victim advocates being published during MIT Sexual Assault Awareness Month. This is the first of four pieces in the series.

He hurt me so badly that I couldn’t bear the feeling of my own hands. My own hands touching my face, my skin. He had tarnished them. Soiled them because all I imagined were his prickly, aggressive, unloving hands.

He was not a stranger. He was not a monster. He was my friend. Someone I thought highly of, trusted and adored. My exasperation and fury ebbed and flowed. I agonized over whether to report him to the MIT Committee on Discipline or the police. As if I needed more agony.

He texted me “Happy birthday!” He didn’t realize that we weren’t on speaking terms. He, in fact, wanted to grab dinner. What did I want? To grab his neck for throwing me into a spiral of anxiety, fear, and unrelenting pain. I met with him in person. While our eyes were locked, his face bore the most pathetic expression. He seemed remorseful.

He was not a stranger. He was not a monster. He was my friend. Someone I thought highly of, trusted and adored. My exasperation and fury ebbed and flowed. I agonized over whether to report him to the MIT Committee on Discipline or the police. As if I needed more agony.

I reasoned that friends forgive. My friends were my world. I couldn’t just blast Antarctica off the face of the Earth. I could forgive him. I could fix him. And I could forgive and fix myself.

I felt a lot better today. I barely thought about it and you all day. When I did think about you, I really wanted to see you. I wanted to text you to see if you were in your room, then come up and talk for an hour like we usually do. But I’m not ready for that yet. And we still haven’t figured out what to do next.

I wrote him letters. He needed to know how I was feeling — my pain, confusion, and most importantly, my willingness to fix our friendship. I would brave the stairs to the fifth floor of his dorm and tiptoe down the hallway. Like a ninja, I slid my letters under his door. Then it was time to run. Fast. Real fast. Turbo, super-charged, all cylinders, “woosh.” I couldn’t see him. Not yet.

When I fixed us, I would be able to shut my eyes and not scream silently in fear. And I would be able to smile. I had to fix us.

I wrote him this letter ten days after he assaulted me. I never gave it to him. It’s pretty pathetic.

I felt a lot better today. I barely thought about it and you all day. When I did think about you, I really wanted to see you. I wanted to text you to see if you were in your room, then come up and talk for an hour like we usually do. But I’m not ready for that yet. And we still haven’t figured out what to do next. What’s the best way to help you. I don’t know how you’re feeling. I have a lot of people to talk to about how I’m feeling. Too many sometimes. It’s helping me feel more removed so I can move on. If you need someone to talk to, VPR is a good place. Or mental health. They’re both confidential. Maybe you don’t need them. I’m sorry to assume. One person I talked to

asked me, “why are you protecting him?” She thought I cared too much about how this would affect you. Maybe because I just really hope it has affected you. Not because I want you to feel as horrible as I have

sometimes; it’s not from a place of revenge. But remorse is a step towards doing better next time. I just want to know that you do care. That we are friends. I’ve lost some friends over this. I just saw how flimsy our friendship was and that they really didn’t care. I liked our friendship. I really liked you. I tried to let you know that. But not in a romantic way. I’m not sure why that was so hard for you, not to understand, but not to act on. Any guy I’m “romantic” with, I stop talking to eventually. I didn’t want that to happen. But maybe now it has anyways. I’m still not sure. It matters what you want and how you’re feeling, too. And if me writing letters bothers you just text me that. I just want to tell you what I’m thinking. I hate when I don’t know how my friends are feeling. I miss you. I don’t know if that means something is wrong with me. Possibly.

I nearly imploded trying to fix our friendship. My heart was littered with landmines loaded with ugly memories. If I continued my charge, I would have suffocated on the ashes of our remains. So I abandoned him and preserved what remained of my spirit. I never fixed us but I can smile. I’m so happy to smile.

Note: This account has been kept anonymous to protect the identity of the author.

Consequences

“SAAM Says” is a collection of narratives by sexual assault survivors and victim advocates being published during MIT Sexual Assault Awareness Month. This is the first of four pieces in the series.

“Don’t worry. Rape happens, but it doesn’t happen here.”

When I heard a brother at my ex-boyfriend’s fraternity say this in earnest, I wept bitterly. Part of me wants to maintain the safe, confident ignorance surrounding his statement. The other part wants to shout the truth: rape happens here.

My ex was finishing his senior year at MIT, I was finishing mine at Wellesley, and we were attempting to kindle a post-breakup friendship at a fraternity party. Some nights to this day, I lie awake and play the tortuous what-if game: what if I hadn’t attended that party? What if we hadn’t shared Jell-O shots and danced together? What if I’d listened to the brothers who pulled me aside and warned me: “Maybe you should keep your distance,” “I don’t want you to get hurt again,” “Did he just pull you onto his lap?”

While waxing poetic about how he couldn’t change the past, saying things like “this has been hard for me too,” he didn’t once apologize. He was clearly more worried about being saddled with the “rapist” label than how I was doing. Sometimes, it’s the “sorry” left unsaid that hurts the most.

What if, when he drunkenly asked for help getting to his room, I’d sent someone else?

What if I’d fought harder and screamed louder?

He woke up with limited memory of the incident, and I only managed to call him “sexually aggressive” in a later conversation before he cut me off, worried

about how this would compromise his respectable image. I didn’t use the word ‘rape’ — I couldn’t — and instead left it at that.

I managed to graduate in spite of what happened. In the time that followed, I was nearly overwhelmed by the sheer number of friends who held me, cried with me, and stayed up all night comforting me. Their wholehearted support ignited a seething, roiling anger inside of me towards my ex — my attacker. So many people were shouldering the consequences of what happened, except for the person who needed to the most.

After months of no contact, months of bitterness mounting inside of me, I impulsively texted him, “Are you free to have a conversation soon?” I wanted him to see me. I wanted him to look me in the eye and confront what he did face-to-face. I wanted, even for just the span of a 20-minute conversation, for him to be held accountable for raping me.

And I wanted to do what I could to make sure he’d never do it again.

more worried about being saddled with the “rapist” label than how I was doing. Sometimes, it’s the “sorry” left unsaid that hurts the most.

I am also learning that it is OK to not be OK — because, quite truthfully, I am not there yet.

At the end of the conversation, I told him that I was going to be okay. Not because what he didn’t wasn’t terrible, but because I was stronger than anything he could possibly do to me. I had an amazing support network of people who were going to help me reclaim my peace of mind — the peace of mind that he’d taken away. I concluded by telling him to never contact me again.

As part of a slow and steady healing process, I’m trying to stop mentally reducing myself to the “rape victim” moniker. Some days it’s harder than most, especially in the rare instances when even that very moniker is called into question. There are people who doubt my story, and there will be people who will doubt it in the future. But I am holding onto this narrative as tightly as I possibly can because on tougher nights when I’ve lost faith in my ability to heal, my story is all I have.

I am also learning that it is OK to not be OK — because, quite truthfully, I am not there yet. I don’t want to apologize for my emotions, and I’m building myself back up to be something more than the scars I’ve acquired. I know it’s going to take time, patience, and a great deal of self-care.

But until that time comes, I just have to take it one day at a time.

Note: This account has been kept anonymous to protect the identity of the author.

Coming back to TFP

When the world is not enough

By Harry Bleyan

It was somewhere along the Pacific Coast Highway, shaded from the setting sun by a row of tall palm trees on both sides, a refreshing headwind wrapping itself around my motorcycle helmet, when it suddenly occurred to me that I'd found what I was looking for. I'd spent the past several months away from school, searching, scouring the vast world outside and within for some elusive purpose, a gem of insight that would justify the profusion of pain and doubt that veiled my time in college up to that point.

And now, surrounded by seemingly perfect tranquility, a paradise of sorts, I finally reflected upon the utter absurdity and futility of my endeavor. I was in a land far, far away from home, a land filled with beautiful sights, sunsets, mountains and forests, but, regardless of all this outward beauty, I suddenly felt the most intense longing for my home back in Cambridge, my little corner of the universe called MIT. Why did I ever leave my home?

Ironically, I Had Truly Found Paradise by being away from it, and the realization was truly disarming. My search had come to an abrupt end, and from that moment on I knew all I wanted to do was to come back.

When I returned, not much seemed to have changed at first. Other than the strange requirement to wear helmets while sailing and my newly acquired ability to see Maseeh from Mass. Ave. over the smoldering ruins of Bexley Hall, MIT went on buzzing with its usual hypnotizing activity.

Classes began, schedules filled up, sleep mysteriously evanesced into oblivion, and clues to research problems began popping up in my morning cereal. But beneath the layer of familiar patterns and routines, I experienced a fundamental shift in how I related to MIT and what sort of role it began to play in my life.

For the first time since early freshman year, I actively wanted to be here, to engage with all facets of life at MIT, to feel and experience and learn and immerse myself in the rivers of wonder that permeate its halls. There appeared a joyous quality to my everyday experience, a thrill that originated from

my exposure to the amazing environment of MIT, a burning happiness that grew and pulsed the more I began to engage with it.

I was so excited by my sudden discovery of this spark that, upon return, I joined the Returning Students Group to connect to more people who've gone through similar experiences, and asked them to share some of their reasons for coming back and the consequent changes they have perceived in their day-to-day lives. I was expecting a homogeneity to their responses.

None ensued.

In fact, the different answers I received were so unexpected that I felt it necessary to write this piece. I was surprised to find that the only thing the returning students all had in common was the fact that we all decided to come back. Beyond that, everyone had a different reason for being here, for putting up with the frequent rides aboard the struggle bus. Some had no reasons and did it out of habit. Some loved it here, some tolerated it, some had a personal vendetta against it. Some fought, some took the punches. Some swam, and some sank.

I now realize that the lack of a common denominator among all the students here is what makes MIT what it is. Our unique culture is a byproduct, a side effect that naturally arises when amazingly diverse people come together to engage in pure discovery, to probe and explore and fail and attempt again, to triumph in the face of seemingly insurmountable odds.

The outside grandiose façade of MIT comes as a result of the vibrancy, the drive, the sheer momentum and invigorating force of the inside of this place, all supported and perpetuated by the beautiful and brilliant people here — by you and me.

The world outside of these walls is dull and slow. Here, however, there prevails a selfless pursuit of awe-inspiring, intricate things that changes and opens you up to new dimensions of possibility and wonder, that makes you aware and appreciative of things you never even knew were possible. This was what I found on that breezy day on the motorcycle.

Ever since I came back, life here has become one of choice, not one of unchangeable circumstance — I am here because I want to be here, because every morning I wake up and choose to power through the challenges I face and emerge victorious. It occurred to me that MIT is not a separate something that “happens” to you, because you're not separate from it. Remember that you are a part of MIT: you shape and affect it, you are “happening” to it.

You are MIT.

Every day I encounter people who are struggling here. It is a hard place, but most of the time the troubles that people have aren't academic — they stem from a somewhat sub-optimal view of MIT and people's relation to it. The point of coming to MIT shouldn't be just to get a diploma, or to ace a class. If it is, then you are choosing to tolerate challenges, to endure them instead of seeking them out. You're unwittingly signing up for a very prolonged, painful existence.

The point should be to spill your curiosity and wonder out onto the world and to develop, direct, and use it. MIT is a means, not an end. A means of achieving things nobody in the world thinks are possible, and that's what makes us different. Each person here is on their own personal journey — one of knowledge, skill, leadership, personal growth, and peace. The success of that journey is the ultimate point, and everything that happens in the process should be seized, cherished, venerated.

People here care intensely. They are passionate and genuine, and I learned that such an environment is not a given. This place is magic, and to continue being magic it needs magical people interested in magical things. People like you and me. You are at the top of the world, and you are able to do great, amazing things. Take pride in that. Marvel at the improbability and nuance hidden in that. Keep doing magic, my friend. You are a part of my experience here, a part of my home, and I am extremely grateful to you for that.

Thank you.

Harry Bleyan is one happy camper. Mens: 2016. Manus: 2017.



SPORTS IN REVIEW





ALEXANDER C. BOST — THE TECH



LENNY MARTINEZ — THE TECH



ALEXANDER C. BOST — THE TECH

March 2015

Maryann Gong '17 claimed the top spot in the 3000m at the NCAA Div. III Indoor Track and Field Championship. Cimran Virdi '16 won her second consecutive national title, winning the pole vault.

May 2015

Women's tennis made program history by making it to the NCAA Elite 8 for the first time. The Engineers had been ranked 13th and upset the 4th-ranked Washington and Lee University.

February 2015

A goal-line interception by undrafted rookie Malcolm Butler helped the Patriots win Super Bowl XLIX. Tom Brady picked up his third Super Bowl MVP and his fourth ring overall.

April 2015

Men's Track and Field won its 15th consecutive NEWMAC championship. Ken Cooper '15, Michael Kaba '16, and William Ruschel '18 won individual honors.

June 2015

Steph Curry and the Golden State Warriors defeated LeBron James and the Cavaliers 4-2. This was the fifth consecutive year that James had made the NBA finals.

2015 Sports **TIMELINE** By Souparno Ghosh SPORTS EDITOR



SARAH LIU—THE TECH



SARAH LIU—THE TECH



MELISSA RENEE SCHUMACHER—THE TECH

July 2015

Serena Williams became the oldest woman to win a Grand Slam singles title in the open era when she clinched her 6th Wimbledon championship.

October 2015

MIT graduate student Alexis Sablone won the street title at the World Skateboarding Championship in South Africa.

September 2015

Judge Berman vacated Tom Brady's four-game suspension in the Deflategate case. Brady led the Patriots to victory over the Steelers on opening night as the Patriots looked to defend their Super Bowl crown.

November 2015

Sean Bingham '16, the program record holder in goals scored, led the Engineers to a record-breaking season and up to the third round of the NCAA Div. III championship.

